

CLAIMS

I claim:

1. A chemical dispensing device for use in a medium comprising:

- a) a housing having a first compartment and a second compartment, said first compartment and said second compartment being separated by a dividing wall, and said second compartment being in fluid communication with said medium;
- b) propulsion means located in, on, and detachably attached to said first compartment, whereby said chemical dispensing device can be self-propelled through said medium;
- c) chemical containment means located in said second compartment, whereby solid chemical compounds are stored for dispersion within a medium; and
- d) chemical dispersement rate adjustment means, whereby the dispersement rate within a medium, of said solid chemical compounds stored for dispersion within said chemical containment means, is adjustable.

2. The chemical dispensing device for use in a medium, according to claim 1, wherein said first compartment is fully sealed from contamination by said medium, and further wherein said propulsion means located in said first compartment is sealed from contamination by said medium.

3. The chemical dispensing device for use in a medium, according to claim 1, wherein said first compartment further includes a flotation unit and a ballast unit to obtain a desired buoyancy for the device as a whole.

4. The chemical dispensing device for use in a medium, according to claim 1, wherein said propulsion means includes an electric motor, power transfer means and an external actuator for setting the device into motion.

5. The chemical dispensing device for use in a medium, according to
10 claim 4, wherein said electric motor is powered by an on-board battery located in said first compartment and connected in electrical communication with said electric motor.

6. The chemical dispensing device for use in a medium, according to claim 4, wherein said external actuator for setting the device into motion is a fish fin-like actuator.

7. The chemical dispensing device for use in a medium, according to claim 4, wherein said external actuator for setting the device into motion is a
20 propeller.

8. The chemical dispensing device for use in a medium, according to claim 4, wherein said electric motor is powered by on-board photovoltaic cells

located on the upper portion of the device when said photovoltaic cells are exposed to light.

9. The chemical dispensing device for use in a medium, according to claim 1, wherein said chemical containment means located in said second compartment includes a detachably removable compartment cover, whereby, said cover is detached, removed, filled with solid chemical to be dispersed, and replaced prior to deployment of said device.

10 10. The chemical dispensing device for use in a medium, according to claim 1, wherein said chemical dispersement rate adjustment means includes a main orifice, a sliding door orifice and a sliding door, whereby the main orifice allows the medium to enter and react with the chemical stored therein and said sliding door allows the rate of expulsion of reacted medium within said second compartment to be adjusted by opening and closing the sliding door thereby increasing and decreasing the sliding door orifice area.

11. A method for making a chemical dispensing device for use in a medium, comprising the steps of:

20 a) providing a housing having a first compartment and a second compartment, said first compartment and said second compartment being separated by a dividing wall, and said second compartment being in fluid communication with said medium;

b) providing propulsion means located in, on, and detachably attached to said first compartment, whereby said chemical dispensing device can be self-propelled through said medium;

c) providing chemical containment means located in said second compartment, whereby solid chemical compounds are stored for dispersion within a medium; and

d) providing chemical dispersement rate adjustment means, whereby the dispersement rate within a medium, of said solid chemical compounds stored for dispersion within said chemical containment means, is adjustable.

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12. The method for making a chemical dispensing device for use in a medium, according to claim 11, wherein said step of providing a housing further includes providing a first compartment that is fully sealed from contamination by said medium, and further wherein said propulsion means located in said first compartment is sealed from contamination by said medium.

13. The method for making a chemical dispensing device for use in a medium, according to claim 11, wherein said step of providing a housing includes providing a housing having a first compartment which further includes a flotation unit and a ballast unit to obtain a desired buoyancy for the device as a whole.

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14. The method for making a chemical dispensing device for use in a medium, according to claim 11, wherein said step of providing propulsion means

includes providing an electric motor, a power transfer means and an external actuator for setting the device into motion.

15. The method for making a chemical dispensing device for use in a medium, according to claim 14, wherein said step of providing an electric motor includes providing an electric motor which is powered by an on-board battery located in said first compartment and connected in electrical communication with said electric motor.

10 16. The method for making a chemical dispensing device for use in a medium, according to claim 14, wherein said step of providing an external actuator for setting the device into motion includes providing a fish fin-like actuator.

17. The method for making a chemical dispensing device for use in a medium, according to claim 14, wherein said step of providing an external actuator for setting the device into motion includes providing a propeller.

18. The method for making a chemical dispensing device for use in a medium, according to claim 14, wherein said step of providing an electric motor
20 further includes providing an electric motor that is powered by on-board photovoltaic cells located on the upper portion of the device when said photovoltaic cells are exposed to light.

19. The method for making a chemical dispensing device for use in a medium, according to claim 11, wherein said step of providing chemical containment means located in said second compartment further includes providing a detachably removable compartment cover, whereby, said cover is detached, removed, filled with solid chemical to be dispersed, and replaced prior to deployment of said device.

20. The method for making a chemical dispensing device for use in a medium, according to claim 11, wherein said step of providing chemical
10 dispersement rate adjustment means further includes providing a main orifice, a sliding door orifice and a sliding door, whereby the main orifice allows the medium to enter and react with the chemical stored therein and said sliding door allows the rate of expulsion of reacted medium within said second compartment to be adjusted by opening and closing the sliding door thereby increasing and decreasing the sliding door orifice area.